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(54) Push-up stand

(57) A push-up stand comprises a base panel 3 having a number of pairs of holes 5, any pair of holes being arranged to receive handlebars 9. Two handlebars 9 are provided and the pairs of holes are spaced from each other and arranged symmetrically in relation to the transverse axis 7 of the base panel 3, for a pre-determined push-up position. One end of the handles has a non-slip end 11 so that the handles can be rotationally adjusted. In an alternative both ends of the handles can be journalled in holes.

FIG. 1

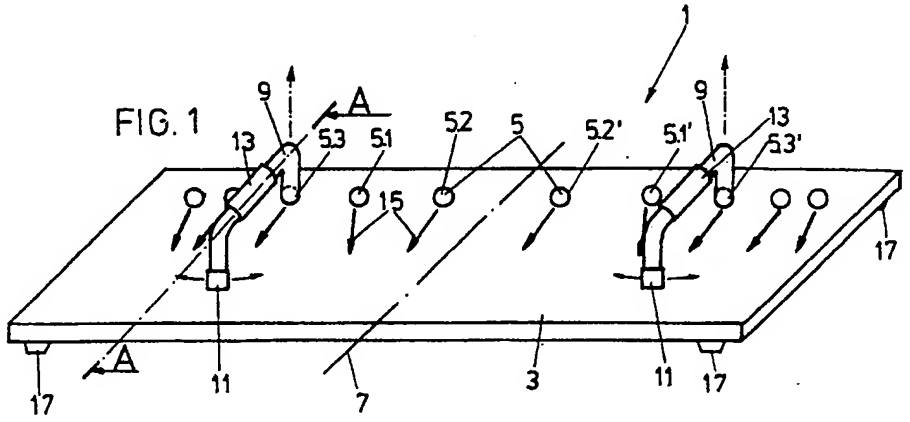
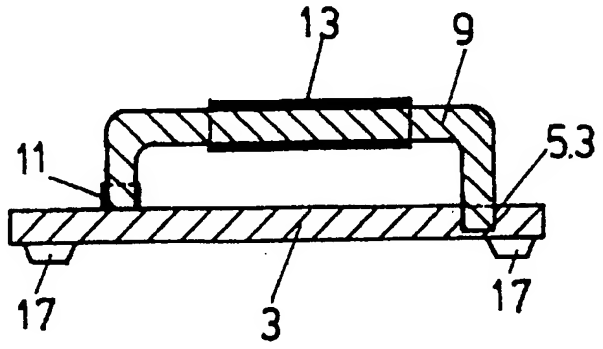


FIG. 2



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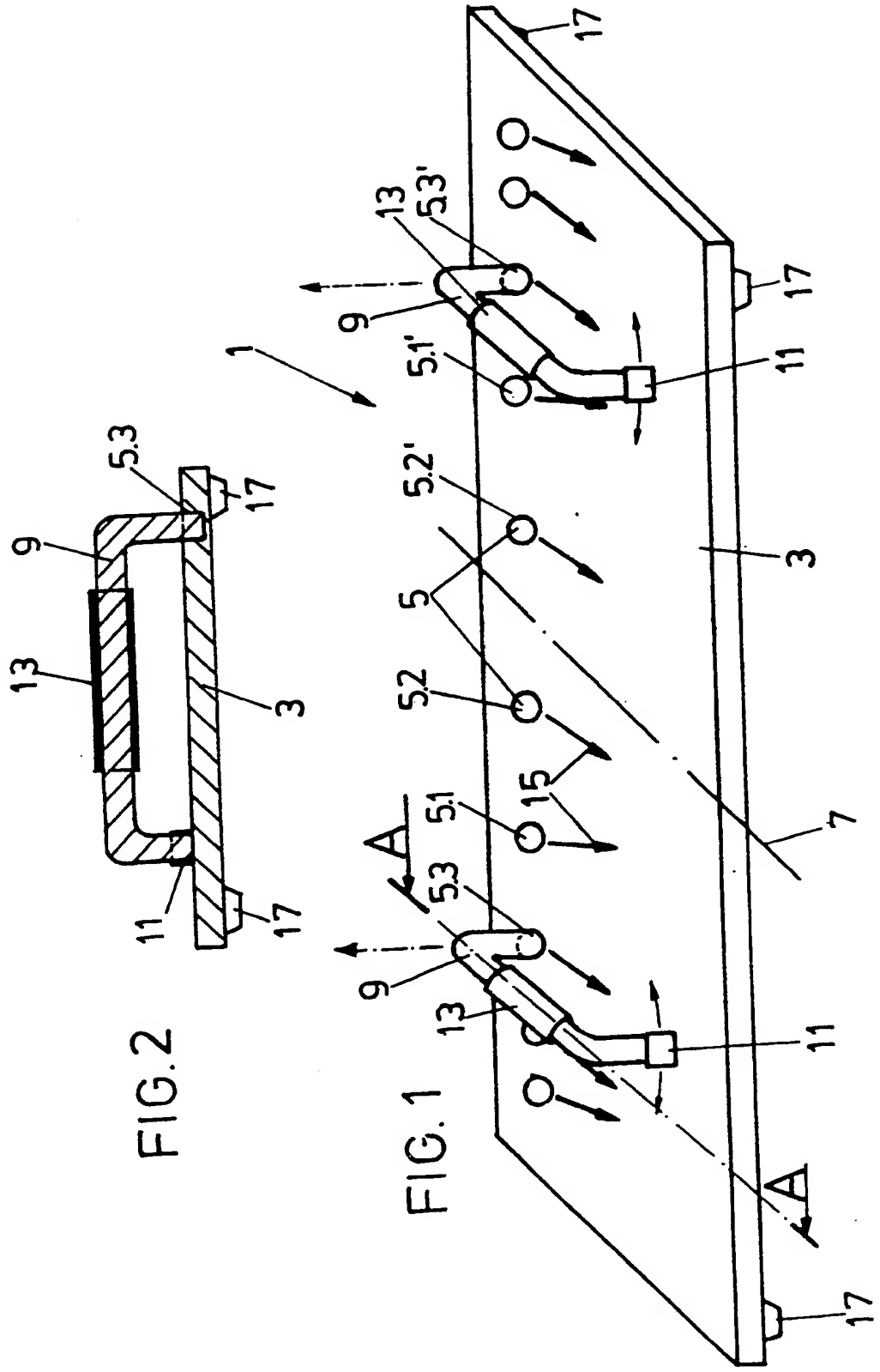

FIG. 1

FIG. 2

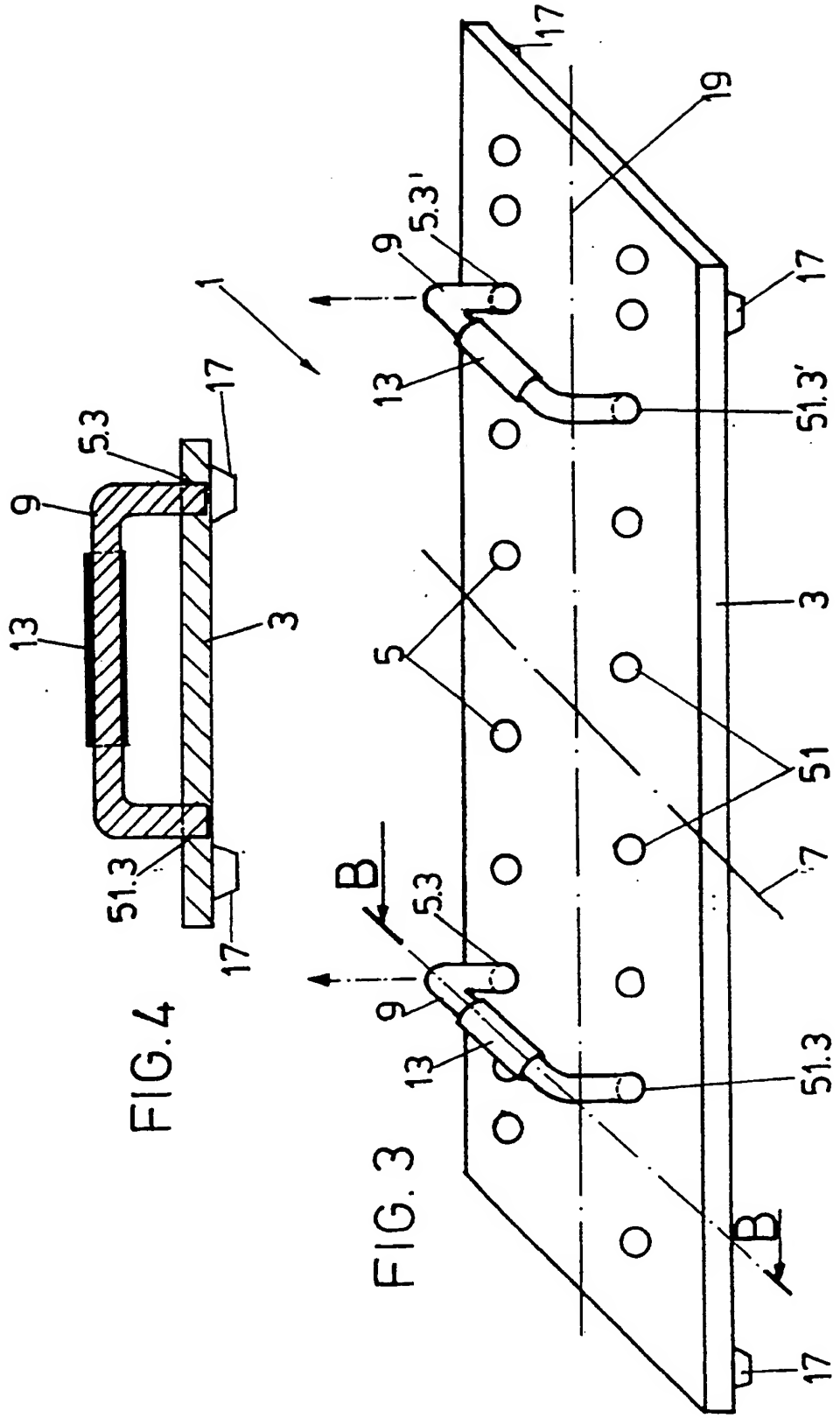

FIG. 3

FIG. 4

GYMNASTICS APPARATUS

The invention concerns a gymnastics apparatus for strengthening the muscles of the upper part of the body and the arms, in particular for performing push-ups.

Push-ups play an important role in physical training by means of sports activities in fitness centres, sports studios and in the private domain. Such push-up exercises generally serve the purpose of strengthening the muscles of the upper body and the arms, i.e. all muscles of the upper and lower arm and a number of chest and shoulder muscles in the upper part of the body.

From the DE-A 157 429 an apparatus for performing gymnastic exercises is known, with which a complete gymnastic exercise programme can be performed. This apparatus consists of a rectangular platform whose bottom side comprises two reinforcing ribs with pivotable wheels, whereby said wheels support the entire apparatus. Two lateral hand grips are provided on the upper side, which may either be mounted on the broad or on the long sides of the apparatus by means of screws.

From the DE-A 2 310 678 a training apparatus is known wherein two fixed handle bars are arranged on an outer rotatable ring and a fixed handle bar is positioned on an inner fixed annular ring. The positions of these handle bars cannot be changed.

These known solutions posess the disadvantage that they are not specifically destined for push-up exercises. It is also not possible to train specific muscles of the upper part of the body or the arms desired to be trained by the user with these appliances.

The present invention therefore proceeds from the problem of providing a gymnastics apparatus with which selected muscles of the upper part of the body and the arms may be specifically trained by means of the performance of push-ups by the user.

According to the invention, the gymnastics apparatus for strengthening the muscles of the upper part of the body and the arms comprises a base panel and two handle bars as well as a number of aperture pairs for receiving the handle bars, whereby the apertures of each aperture pair are arranged homologously in relation to the transverse axis of the base panel and spaced from each other for a predetermined push-up position.

A handle bar end is respectively insertable in the paired apertures, whereby the respective other handle bar end may comprise an antiskid sheath which rests on the base panel when the handle bar end is in inserted position.

Markings are provided associated to the aperture pairs, whereby said markings point in the direction of the remote edge of the base panel to determine the alignment of the handle bars.

The markings of one aperture pair may point in a different direction than the markings of another aperture pair. They are, however, substantially directed towards the remote edge of the base panel.

In a further embodiment of the invention a further aperture pair arranged symmetrically in relation to the longitudinal axis of the base panel is provided for each aperture pair arranged homologously in relation to the transverse axis of the base panel. The aperture pairs arranged homologously in relation to the transverse axis of the base panel may be respectively arranged with different distances between each other. The distance between each aperture pair arranged homologously in relation to the transverse axis of the base panel and a further aperture pair arranged symmetrically in relation to the longitudinal axis of the base panel is equal to the width of the handle bars. In this embodiment the two ends of each handle bar are respectively insertable in the associated aperture pairs.

The present invention permits the user to insert and thus fix the handle bar pair to be used in the base panel with differential spacing of the handle bars, so that when gripping the handle bars the arms of the user may be differentially spaced from each other. Only this measure permits targetted training of selected muscles in the upper part of the body resp. the arms. A further advantage of the invention consists in the fact that the respective alignment of the handle bars can be determined by a different distance in relation to the course of the transverse axis of the base panel, so that the arms can be brought into a position differing from the nromal position when the user grips the handle bars. This

permits additional targetted training and strengthening of further selected muscles.

The gymnastics apparatus also permits the hands of the user to be positioned differently than is usually the case during push-ups where the palms are normally positioned flat on the ground. When using the present apparatus the hands occupy a position such as that occurring when gripping a rod or a bar, so that the hands, in particular the hand joints, are subject to a different type of stress, which also contributes to targetted training of the muscles of the upper and lower arms.

By simply pulling the handle bars out of the aperture pairs and inserting the same in a different aperture pair, a completely different push-up position can be achieved. The apparatus is easy to handle and to transport.

Two exemplary embodiments serve to provide a more detailed description of the invention. The drawings show the following:

Fig. 1: the gymnastics apparatus in a first embodiment;

Fig. 2: a cross-section along line A - A according to Fig. 1;

Fig. 3: a second embodiment of the gymnastics apparatus; and

Fig. 4: a cross-section along line B - B according to Fig. 3.

The first embodiment according to Figs. 1 and 2 refers to a gymnastics apparatus 1 comprising a base panel 3. Said base panel 3 is preferably made of wood, but can also consist of a synthetic material or a light metal. In the upper area of the base panel 3 a number of circular apertures are disposed, whereby two apertures respectively, here designated 5.1 and 5.1', form an aperture pair 5. Each aperture pair 5 is thereby arranged homologously in relation to the transverse axis 7 of the base panel, and the aperture pairs 5 are spaced from each other. Each aperture pair 5 is positioned at a different distance from another aperture pair 5 designated 5.2 and 5.2' in the Figure.

Two handle bars 9 are essential components of the gymnastics apparatus 1 and are adapted to be inserted by one handle bar end in an aperture, e.g. 5.3 or 5.3'. The insertable portion of the end of the handle bar is shorter than the thickness of the base panel 3. The handle bars 9 are thereby provided with a firm support in the base panel 3. The respective other end of the handle bar 9 comprises an antiskid sheath, preferably made of rubber, which rests securely on the base panel 3 when the handle bars 9 are inserted in the respective aperture pairs 5. If desired by the user, the handle bars 9 can be pivoted towards the right and the left around the respective aperture axis 5.3 resp. 5.3' in the area of the sheath 11, as indicated by the arrows, so as to define a different push-up position. The handle bars 9 comprise in their central portion spring elastic hand-grips 13 made of rubber or another suitable material to reduce the

pressure on the palms and achieve a better grip. The handle bars 9 consist preferably of steel pipe or of a light metal. As indicated by the dashed arrows, the handle bars can easily be pulled out of the respective aperture pair 5.

The upper side of the base panel 3 comprises markings 15 pointing respectively from the aperture pairs 5 in the direction of the remote edge of the base panel 3. These markings are provided to indicate to the user the direction in which the handle bars can be aligned. The markings 15 substantially all point in the direction of the remote upper edge of base panel 3, but they proceed in different angles with respect to each other, so that, when the handle bars 9 are aligned accordingly, the muscles of the user to be trained can be subjected to varying strain. These markings 15 can be simple arrows or other symbols applied to the surface of base panel 3. To ensure that base panel 3 is slip-safe, base panel 3 is provided with antiskid pedestals 17 on its bottom side. In an embodiment not shown in a drawing the respective insertable end of the handle bar 9 may be provided with a camber to secure the handle bar 9, whereby said camber comes into engagement with a corresponding groove in the respective aperture 5.1 to fix a predetermined handle bar position.

Fig. 2 presents a cross-section along the line A -A according to Fig. 1. It shows that one end of the handle bar 9 is inserted in the aperture 5.3 of an aperture pair 5, whilst the other end of the handle bar 9, which is enclosed in the sheath 11, rests on the base panel 3. The central portion of the handle bar 9 is enclosed by the spring elastic hand grip 13 which is gripped by the user.

A description of a further embodiment follows, whereby like parts have the same reference numbers as in Figs. 1 and 2. The essential difference of the embodiment according to Figs. 3 and 4 compared to the embodiment according to Figs. 1 and 2 is that a further aperture pair arranged symmetrically in relation to the longitudinal axis 19 of the base panel 3 and associated to the aperture pairs 5 arranged homologously in relation to the transverse axis 7 of the base panel 3 is provided in the base panel 3. The distance between the aperture pairs 5 arranged homologously in relation to the transverse axis of the base panel 3 and the further aperture pair 51 arranged symmetrically in relation to the longitudinal axis 19 of the base panel 3 is equal to the width of the handle bars 9.

One end of the handle bars 9 is respectively inserted e.g. in the apertures 5.3 resp. 5.3', exactly as shown in Figs. 1 and 2.

Contrary to the first embodiment, the respective other end of the handle bar 9 is inserted in the apertures 51.3 and 51.3' of the aperture pair 51 associated to the apertures 5.3 and 5.3' of aperture pair 5. Both ends of the handle bars 9 are thereby rigidly connected to the base panel 3.

The aperture pairs 5 respectively arranged homologously in relation to the transverse axis of base panel 3 are differentially spaced from each other, as is also the case in the first embodiment. In relation to the aperture pairs 5.1 the aperture pairs 5.3 may be aligned in an angle in relation to the transverse axis 7 of the base panel 3 which may

differ from the angle in which the aperture pairs 5.1 are arranged in relation to the transverse axis 7 of the base panel 3, whereby, however, it is important that the distance between the associated aperture pairs always corresponds to the width of the handle bars 9.

The great number of options regrading the arrangement of the respective aperture pairs both in the first and in the second embodiment provides great variability of the gymnastics apparatus 1, since the handle bars 9 can be positioned at different distances in relation to the transverse axis 7 of the base panel 3 and in different angles in relation to the course of said transverse axis 7. These measures facilitate targetted training of selected muscles of the upper part of the body resp. the arms of the user.

CLAIMS

1. Gymnastics apparatus for strengthening the muscles of the upper part of the body and the arms, comprising a base panel (3), two handle bars (9) and a number of aperture pairs (5) arranged in the base panel (3) to receive the handle bars (9), whereby the apertures (5.1 resp. 5.1') of each aperture pair (5) are spaced from each other and arranged homologously in relation to the transverse axis (7) of the base panel (3) for a predetermined push-up position.

2. Gymnastics aparatus according to claim 1, characterised in that a further aperture pair (51) arranged symetrically in relation to the longitudinal axis (19) of the base panel (3) and associated to each aperture pair (5) arranged homologously in relation to the transverse axis (7) of the base panel (3) is provided in the base panel (3) for a predetermined push-up position.

3. Gymnastics apparatus according to claim 1 or 2, characterised in that the respective aperture pairs (5) arranged homologously in relation to the transverse axis of the base panel (3) are differentially spaced from each other.

4. Gymnastics apparatus according to claim 2, characterised in that the distance between each aperture pair (5) arranged homologously in relation to the transverse axis (7) of base panel (3) and a further aperture pair (51) arranged symmetrically in relation to the longitudinal axis (19) of the base panel (3) is equal to the width of the handle bars (9).

5. Gymnastics apparatus according to claim 1, characterised in that one end of a handle bar (9) is respectively insertable in one aperture of the aperture pairs (5) associated with each other.

6. Gymnastics apparatus according to claim 5, characterised in that the respective other end of the handle bar (9) comprises an antiskid sheath (11) which rests on the base panel (3) when the handle bar (9) is inserted.

7. Gymnastics apparatus according to claim 2, characterised in that the respective ends of the handle bars (9) are insertable in apertures of the aperture pairs associated with each other (5 resp. 51).

Patents Act 1977
Examiner's report to the Comptroller under Section 17
(The Search report)

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Relevant Technical Fields

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Search Examiner
A T BLUNT

Date of completion of Search
16 NOVEMBER 1993

Databases (see below)
(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii)

Documents considered relevant following a search in respect of Claims :-
1-7

Categories of documents

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E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

&: Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages		Relevant to claim(s)
Y	WO 84/02660 A	(DIVERSIFIED PRODUCTS)	1-5, 7
Y	US 4358106	(SHADFORD)	1-5, 7

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